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(54) **An improved front panel mounting device for a drawer**

Verbesserte Frontplatten- Montageeinrichtung für eine Schublade

Dispositif de montage amelioré pour un panneau frontal d'un tiroir

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(56) References cited:
US-A- 5 147 124
US-A- 5 281 022
US-A- 5 540 515
US-A- 5 664 857

EP 1 364 597 B1

Description

FIELD OF THE INVENTION

[0001] The present invention relates to an improved mounting device to securely and quickly mount a first panel member of furniture in a perpendicular relationship to a second panel member of the furniture unit. The present invention more particularly relates to a mounting device and a method thereof to securely and quickly mount a front panel of a drawer to a pair of parallel sidewalls of the said drawer.

BACKGROUND OF THE INVENTION

[0002] A panel-mounting device for a drawer is known from AT-B 391 406. One of the problems in the prior art mounting mechanism or drawer is that the position of the front panel in relation to the drawer side panels is not adjustable after the front panel is fixed to the drawer side panels. Alternatively complex mechanical devices are provided to achieve this objective. The purpose of such a panel - mounting device is to adjustably secure a front panel onto the drawer in a perpendicular relationship so that when an item of furniture is assembled, the position of the front panel may be adjusted in a lateral and/or vertical direction. The panel-mounting device should also allow the front panels to be assembled quickly and securely to the drawers.

[0003] US 5,540,515 describes an apparatus for securing a front panel of a drawer to a drawer frame, the apparatus including a holding part to be secured to the front panel and a support part to be secured to the drawer frame. A helical spring acts in the longitudinal direction of the drawer frame between the support part and the holding part. When the front panel is mounted, a limited relative movement of the holding part with respect to the support part in opposition to the spring action is possible.

SUMMARY OF THE INVENTION

[0004] The objective of the present invention is to provide an improved front panel mounting device to enhance the mounting mechanism of a front panel to a drawer side panel.

[0005] It is a further objective of the present invention to provide a panel-mounting device, which can be mounted onto the drawer side panels quickly and where the front panel is horizontally and/or vertically adjustable during or after installation.

[0006] The improved mounting device is configured with the objective of holding the front panel (for example a drawer) firmly against the side panels (of the drawer). When a mounting bracket is fixed on the inner face of the front panel and inserted inside the receiving bracket, which is mounted onto the side panels (of the drawer), the front panel is firmly held against the side panels.

[0007] The present invention provides a mounting device to secure a front panel in perpendicular relationship onto a side panel, the mounting device comprising a mounting bracket secured in use to the front panel and a receiving bracket assembly secured in use to the side panel, said front and side panels forming part of a furniture unit, wherein:

the mounting bracket has a nose edge removably secured onto the receiving bracket assembly, wherein the nose edge of the mounting bracket includes a bottom face, a locking face and a clamping face, the clamping face having grooves provided thereon;

the receiving bracket assembly comprises a holding block to receive in registration the nose edge, a slider to securely hold the mounting bracket and allow linear movement of the mounting bracket within the receiving bracket assembly, a rotatably mounted actuator plate, and a biased means pivotally mounted to tension the actuator plate;

wherein the slider is provided with an opening and a swing arm of the actuator plate is inserted therein, the actuator plate being rotatable to move the slider linearly between a first position in which it securely clamps the mounting bracket and a second position that allows horizontal adjustment of the mounting bracket; and

wherein by adjusting the actuator plate and an eccentric cam mechanism means, the front panel can be adjusted in two perpendicular axes in relation to the side panel.

[0008] The holding block may include a recessed portion with grooves. The slider may include an angular face corresponding to the locking face of the nose edge and wherein when the front panel is securely clamped to the side panels, both the angular face and the locking face are in registration.

[0009] A second tail end of the actuator plate may be pivotally biased against a spring mechanism holding body such that when the spring mechanism holding body is in a first position, the swing arm of the actuator plate and the slider are distal to the mounting bracket and when the spring mechanism holding body is rotated to a second position, the swing arm and the slider are proximate to the mounting bracket, and wherein in the first position the slider and the locking face of the mounting bracket are not locked in position and in the second position the slider and the locking face of the mounting bracket are in a locked position.

[0010] The eccentric cam mechanism may be operable to adjust the front panel in one linear movement. The actuator plate may be operable to adjust the front panel in a perpendicular direction to the direction of movements above.

BRIEF DESCRIPTION OF THE FIGURES

[0011]

Figure 1 shows a perspective view of a front panel mounted to a drawer by using the present mounting device.

Figure 2 shows a perspective view of a mounting bracket of the present invention.

Figure 3 shows a perspective view of an angle plate of the receiving portion.

Figure 4 shows an exploded view of the mounting bracket, the angle plate, the cover plate, the sidewall of the drawer and other components parts.

Figure 5 shows a perspective view of a cover plate of the receiving portion.

Figure 6 shows a perspective top and bottom view of a holding block.

Figure 7 shows a perspective top and bottom view of a slider.

Figure 8 shows a perspective view of an actuator of the present invention.

Figure 9 shows a perspective view of a spring mechanism holding means of the present invention.

Figure 10 shows a side cross-section view of the receiving portion in its first position.

Figure 11 shows a perspective view of the receiving portion in a second position.

Figure 12 shows a side cross-section view of the receiving portion in a second position.

Figure 13 shows a side cross-section view of the mounting bracket of the front panel placed in the receiving portion of the drawer.

Figure 14 shows a perspective view of the upper and bottom panel of the side panels of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0012] Figure 1 illustrates a drawer (10), which includes a front panel (12), fastened to two parallel sidewalls (14) by means of a fastening device (16) of the present invention. Each of the said sidewall (14) can be dismantled into separate members, defined as an upper panel (14A) and a bottom panel (14B). In the present invention it is preferred that the upper panel (14A) is provided with an opening (19) on its side surface. The said sidewalls of the present invention are preferably made of rigid structure such as steel, wood, plastics, metal or other rigid material such as chipboard, fiberboard and etc (Figures 1 & 14).

[0013] The fastening device (16) comprises of a mounting bracket (18) and a receiving bracket (20). The said mounting bracket (18) is mounted onto the front panel (12) by screw means wherein the mounting bracket (18) is positioned extending perpendicularly to the front panel (12). The said receiving bracket (20) is positioned in a cavity created in the upper panel (14A) or at the bottom panel (14B) in the event the upper panel is of hollow section, (Figure 1).

[0014] The said mounting bracket (18) comprises of a first flange (30) and a second flange (31). The first flange (30) is provided with a clamp means for attaching to the front panel (12). The second flange (31) is positioned perpendicular to the first flange (30). The lower edge portion of the second flange (31) is provided with a nose edge (32). The nose edge (32) further includes a bottom face (33), a locking face (34) and a clamping face (35). The clamping face (35) is further provided with a plurality of vertical serration, whose function will be described later, (Figure 2).

[0015] The receiving bracket (20) comprises of an angle plate (40) and a cover plate (50) assembled together. The cover plate (50) houses a holding block (60), a slider (70), an actuator plate (80), a set of pivot pins (100,101), an eccentric cam mechanism means (110), a spring mechanism (120), a spring holding body (90) and a screw means (130). Each of the above-mentioned features will be described in detail now, (Figure 4).

[0016] The angle plate (40) is provided with a first flange (41) and a second flange (42). Both the first and second flange (41,42) are positioned perpendicular to each other. The first flange (42) is provided with a recess portion (43). The recess portion (43) is further provided with a first opening (44), wherein the first opening (44) is internally threaded. The second flange (42) is also provided with a second opening (45) wherein the second opening (45) is provided to receive the eccentric cam mechanism means (110). The first flange (41) of the angle plate (40) is mounted to the upper surface of the bottom panel of the sidewall (14B), (Figure 14). A third flange (42A) is provided to the first flange (41) and is used as a cover to cover the cover plate (50) upon assembly.

[0017] The cover plate (50) is a 'V' shaped structure with a first vertical face (51) and a second vertical face (52). Both the first and second vertical faces (51.52) are continuous and are integral unit and are positioned parallel to each other. The first vertical face (51) is provided with a recess portion (53) and wherein an oblong shaped opening (54) is provided therein. The first vertical face (51) is further provided with a guide opening means (55). The guide opening means (55) is designed to receive and guide the eccentric cam mechanism means (110)

into the second opening (45) of the angle plate (40). A plurality of projection guide means (56) are provided on both the first and second vertical faces (51,52) of the cover plate (50). The projection guide means (56) are designed in such a manner that, the projecting portion of the projection guides means on the first vertical face (51) protrude, facing the other projection guide means (56) of the second vertical face (52) and vice versa. The second vertical face (52) is further provided with a guide slot (57). Both the first and second vertical faces (51,52) are provided with a plurality of identical openings (58A, 58B, 5SC), (Figure 5).

[0018] The holding block (60) is provided with locators (61) on each vertical face of the holding block (60). The holding block is further provided with a receiving portion (62) and wherein a plurality of vertical serrations are provided therein. The said receiving portion (62) is positioned in a recess bracket (63) provided on the holding block (60) and whose width is larger then the width of the nose edge (32) of the mounting bracket (18). The recess bracket (63) is designed and configured to receive and laterally adjust the mounting bracket (18) when the front panel is being mounted to the drawer, (Figure 6).

[0019] The slider (70) is a substantially rectangular block with one inner edge tapered off, and is provided with grooves as guide track (71) on either sides of its vertical face(72). The function of the said guide track (71) is to guide the slider (70) along the first and second vertical faces (51,52) when the slider is introduced into the cover plate (50). The slider (70) is further provided with a vertically positioned opening (73). Said vertical opening (73) is positioned perpendicular to an angularly positioned face (74)(hereinafter referred as an angular face) of the slider (70). The inner portion of the vertical opening (73) is provided with a first and second locking face (75,76) wherein both the locking faces (75,76) are positioned opposite of each other (Figure 7).

[0020] The actuator plate (80) is a rigid planar body with a swing arm (81) to move the slider forward and backwards when the slider and the actuator plate (80) are assembled together and a vertical flap (82). The combination of the vertical flap (82) and a flat face (83) in an assembly allows the front panel (12) upon mounting to be adjusted horizontally. The actuator plate (80) is also provided with a first and second tail end portions (84,85). The flat face (83) is further provided with an opening (86) and a screwdriver slot (87). Finally, the actuator (80) also includes a guide means (88), which is positioned perpendicularly to the flat face (83), (Figure 8).

[0021] Finally, the spring holding body (90) is a finger like member and includes a first recess portion (91) to receive the helical spring (120) and a second recess portion (92) to receive the pivot pin (101). The spring holding body (90) is further provided with a V - shaped recessed edge wherein said pivot edge (93) is positioned at the mid edge portion of the spring holding body (90) and opposite the second recess portion (92), (Figure 9)

[0022] Now, the manner each of the above mentioned components are assembled, the working mechanism of the present embodiment and other features not described earlier will be described now.

[0023] Firstly, the angle plate (40) is fastened onto the bottom panel (148) of the parallel sidewalls (14). The eccentric cam mechanism means (110) is then introduced and mounted to the vertical flange (42) of the angle plate (40). This arrangement allows the cover plate (50) to be adjusted vertically when the front panel (12) is mounted to the drawer (10).

[0024] The components to be housed in the cover plate (50) are assembled together before the cover plate (50) is mounted onto the angle plate (40). Firstly, the holding block (60) is introduced and securely fastened between the first vertical face (51) and the second vertical face (52) of the cover plate (50). This is done by introducing the locators (61) of the holding block (60) into the opening (58A) of the cover plate (50), (Figure 4).

[0025] Then the slider (70) is also introduced between the first vertical face (51) and the second vertical face (52) of the cover plate (50) by guiding the guide track (71) of the slider (70) into the projection guide means (56) of the cover plate (50), (Figure 4).

[0026] The actuator plate (80) is then introduced between the first vertical face (51) and the second vertical face (52) of the cover plate (50). The swing arm (81) of the actuator (80) is positioned in the inner portion of the vertically positioned opening (73) of the slider (70). In this position, the guide means (88) is securely placed in the guide slot (57) of the cover plate (50). The pivot pin (100) is then introduced into the opening (58B) on the cover plate (50) and extending into the opening (86) on the actuator (80) to form a pivoted point for the actuator (Figure 4).

[0027] The spring holding body (90) with the helical spring (120) mounted thereon is positioned in its predetermined positioned in such a manner that, the pivot edge (93) of the spring holding body (90) is in a physical contact with the second tail end (85) of the actuator. The other pivot pin (101) is then introduced into the opening (58C) of the cover plate (50). The pivot pin (101) compresses the helical spring (120) wherein the spring holding body (90) exerts force on the second tail end (85) of the actuator plate (80). The pivot pin (101) is permanently fixed to the spring holding body (90), preferably by riveting. When the slider (70) and the actuator (80) are in a nest position, the swing arm (81) of the actuator plate (80) will be physically in contact with the locking face (75) of the slider (70), (Figures 4 & 10). In other words, the receiving bracket (20) is now in a first position. Then the cover plate (50) with assembled components as foresaid is mounted onto the angle plate (40) in such a manner that, when the cover plate (50) is introduced to the angle plate (40) the recess portion (43) on the second flange (42) of the angle plate (40) and the recess portion (53) on the first vertical face (51) of the cover plate (50) are in a linear alignment with each other, (superimposed on each other). Then the screw means (130) is introduced into the

oblong shaped opening (54) on the cover plate (50) and driven into the first opening (44) of the angle plate (40). The function of the screw means (130) is to firmly hold the cover plate (50) onto the angle plate (40), (Figure 4).

[0028] When the receiving bracket (20) has been assembled and securely mounted onto the bottom panel of the parallel sidewall (14B), the upper panel of the parallel sidewall (14A) is placed onto the bottom panel (14B) and the upper panel is securely mounted to the bottom portion. On the other hand, the mounting bracket (18) is securely mounted onto the front panel (12) at its predetermined position. The above description only described the receiving portion (20) mounted to one of the parallel sidewalls (14) of the drawer (10). The other parallel sidewall (14) of the drawer (10) is also provided with an identical arrangement as described above.

[0029] Therefore, the drawer (10) is provided with a receiving bracket (20) on each of its sidewalls corresponding to each mounting bracket (18) mounted at each side of the front panel (12).

[0030] Before the front panel (12) is mounted onto the drawer (10), the actuator plate (80) is rotated to its second position. This is done by inserting a screwdriver into the screwdriver slot (87) via the opening (19) provided on the upper panel of the sidewall (14A). In this second position the helical spring (120) exerts force onto the second tail end (85) of the actuator plate (80). In this second position the guide means (88) of the actuator plat (80) is rested on the guide slot (57) of the cover plate (50). In other words, the guide slot (57) acts as a stopper means to restrict further rotation of the actuator plate (80). In this position also, the slider (70) is pushed backwards to its second position towards the eccentric cam mechanism means (110) by the swing arm (81) of the actuator (80), (Figures 11 & 12). Now the receiving bracket (20) is in its second position.

[0031] The front panel (12) with the mounting bracket (18) mounted thereon by introducing the mounting bracket (18) into the receiving bracket (20). This is done by bringing the mounting bracket (18) in a linear alignment with the opening of the receiving bracket (20), moving the front panel into the receiving portion and then moving the front panel vertically downwards so that the nose edge (32) of the mounting bracket (18) is positioned in the recess bracket (63) of the holding block (60). The bottom face (33) on the nose edge (32) of the mounting bracket (18) will move the first tail end (84) of the actuator plate (80) which will result the actuator plate (80) to move back into its first position. At the same time, the swing arm (81) of the actuator plate (80) will move the slider (70) from its second position back into its first position. This is done by moving the locking face (75) of the slider (70) so that the angular face (74) of the slider (70) will slide over the locking face (34) of the mounting bracket (18), (Figures 11 & 12).

[0032] When the front panel (12) is fully clammed onto the drawer (10), the angular face (74) of the slider (70) will slide over the locking face (34) of the mounting bracket (18) while the clamping face (35) of the mounting bracket (18) will slide over the receiving portion (62) of the holding block (60). In this position, the surface of the front panel (12) is fully in contact with the front portion of the drawer (10), (Figure 13).

[0033] When the front panel (12) is being mounted to the drawer (to), the front panel (12) can be adjusted horizontally and vertically so that the front panel (12) is properly aligned with the drawer (10). To adjust the front panel (12) horizontally, lateral force is applied onto the vertical flap (82) of the actuator (80). This will result in the locking face (76) to be moved by the swing arm (81) of the actuator plate (80) from its present position. This will further result in the angular face (74) of the slider (70) to be released from the locking face (34) of the mounting bracket (18). Now the said front panel (12) can be horizontally adjusted. When the front panel (12) has been adjusted horizontally, lateral force applied on the vertical flap (82) is released and the front panel (12) is securely held in its position. At this position the angular face (74) of the slider (70) is biased against the locking face (34) of the mounting bracket (18). It will be appreciated that the grooves in both the angular face (74) and the locking face (34) will be in contact with each other in a tight manner to prevent any sliding or slippage. To adjust the front panel (12) vertically, the screw means (130) is loosened and the eccentric cam mechanism means (110) is rotated (clockwise or anticlockwise) to move the front panel (12) vertically upwards and downwards. When the front panel (12) has been adjusted vertically the screw means (130) is securely screwed to hold the front panel (12) in its position.

[0034] To remove the front panel (12) from the drawer, lateral force is applied onto the vertical flap (82) of the actuator plat (80). This will result in the locking face (76) to be moved by the swing arm (81) of the actuator plate (80) from its present position. This will further result in the angular face (74) of the slider (70) to be released from the locking face (34) of the mounting bracket (18). The front panel (12) is then removed from the drawer (10). Another way to remove the front panel (112) from the drawer (10) is by inserting a screwdriver into the screwdriver slot (87) and rotating the actuator plate (80) into its first position. It is obvious that both the receiving bracket (20) on the drawer (10) have to work at the same time in order to adjust the front panel horizontally or vertically and when the front panel is mounted and removed from the drawer.

Claims

1. A mounting device to secure a front panel (12) in perpendicular relationship onto a side panel (14), the mounting device comprising a mounting bracket (18) secured in use to the front panel and a receiving bracket assembly (20) secured in use to the side panel, said front and side panels forming part of a

furniture unit, wherein:

the mounting bracket (18) has a nose edge (32) removably secured onto the receiving bracket assembly (20); and
the receiving bracket assembly (20) comprises a holding block (60) to receive in registration the nose edge (32), a rotatably mounted actuator plate (80), and a biased means pivotally mounted to tension the actuator plate;
characterized in that:

the nose edge (32) of the mounting bracket (18) includes a bottom face (33), a locking face (34) and a clamping face (35), the clamping face having grooves provided thereon;
the receiving bracket assembly (20) further comprises a slider (70) to securely hold the mounting bracket (18) and to allow linear movement of the mounting bracket within the receiving bracket assembly; and
the slider (70) is provided with an opening (73) and a swing arm (81) of the actuator plate (80) is inserted therein, the actuator plate being rotatable to move the slider linearly between a first position in which it securely clamps the mounting bracket (18) and a second position that allows horizontal adjustment of the mounting bracket;
wherein, by adjusting the actuator plate (80) and an eccentric cam mechanism means (110), the front panel (12) can be adjusted in two perpendicular axes in relation to the side panel (14).

2. A mounting device as claimed in Claim 1 wherein the holding block (60) includes a recessed portion (63) with grooves.

3. A mounting device as claimed in Claim 1 or claim 2 wherein the slider (70) includes an angular face (74) corresponding to the locking face (34) of the nose edge (32) and wherein when the front panel (12) is securely clamped to the side panel (14), both the angular face (74) and the locking face (34) are in registration.

4. A mounting device as claimed in any one of claims 1 to 3 wherein a second tail end (85) of the actuator plate (80) is pivotally biased against a spring mechanism holding body (90) such that when the spring mechanism holding body (90) is in a first position, the swing arm (81) of the actuator plate (80) and the slider (70) are distal to the mounting bracket (18) and when the spring mechanism holding body (90) is rotated to a second position the swing arm (81) and the slider (70) are proximate to the mounting bracket (18), and wherein in the first position the slider (70) and the locking face (34) of the mounting bracket (18) are not locked in position and in the second position the slider (70) and the locking face (34) of the mounting bracket (18) are in a locked position.

5. A mounting device as claimed in any of Claims 1 to 4 wherein the eccentric cam mechanism (110) is operable to adjust the front panel (12) in one linear movement.

6. A mounting device as claimed in any of Claims 1 to 5 wherein the actuator plate (80) is operable to adjust the front panel (12) in a perpendicular direction to the direction of movement in Claim 5.

7. A drawer assembly, which includes the mounting device as claimed in any of Claims 1 to 6.

Patentansprüche

1. Befestigungseinheit zum Befestigen einer Frontplatte (12) in senkrechtem Verhältnis an einer Seitenplatte (14), wobei die Befestigungseinheit einen Montagebügel (18), der im Gebrauch an der Frontplatte befestigt ist, und eine Bügelaufnahmeeinheit (20) umfasst, die im Gebrauch an der Seitenplatte befestigt ist, wobei die Vorder- und Seitenplatte einen Teil eines Möbelstücks bilden, wobei:

der Montagebügel (18) eine Ansatzkante (32) hat, die abnehmbar an der Bügelaufnahmeeinheit (20) befestigt ist; und
die Bügelaufnahmeeinheit (20) einen Halteblock (60) umfasst, um die Ansatzkante (32), eine drehbeweglich angebrachte Stellplatte (80) und eine vorgespannte Einrichtung passgenau aufzunehmen, die schwenkbeweglich angebracht ist, um die Stellplatte zu spannen;
dadurch gekennzeichnet, dass
die Ansatzkante (32) des Montagebügels (18) eine Bodenfläche (33), eine Einspannfläche (34) und eine Klemmfläche (35) umfasst, wobei die Klemmfläche darauf vorgesehene Rillen hat;
die Bügelaufnahmeeinheit (20) darüber hinaus ein Gleitstück (70) umfasst, um den Montagebügel (18) sicher zu halten und eine lineare Bewegung des Montagebügels in der Bügelaufnahmeeinheit zuzulassen; und
das Gleitstück (70) mit einer Öffnung (73) versehen und ein Schwenkarm (81) der Stellplatte (80) in diese eingesteckt ist, wobei die Stellplatte drehbar ist, um das Gleitstück linear zwischen einer ersten Position, in der sie den Montagebügel (18) sicher festklemmt, und einer zweiten Position, die eine horizontale Einstellung des Montagebügels zulässt, zu bewegen;

wobei durch Einstellen der Stellplatte (80) und einer exzentrischen Nockenmechanismuseinrichtung (110) die Frontplatte (12) im Verhältnis zur Seitenplatte (14) in zwei senkrechten Achsen eingestellt werden kann.

2. Befestigungseinheit nach Anspruch 1, wobei der Halteblock (60) einen Ausnehmungsabschnitt (63) mit Rillen umfasst.

3. Befestigungseinheit nach Anspruch 1 oder 2, wobei das Gleitstück (70) eine Winkelfläche (74) umfasst, die der Einspannfläche (34) der Ansatzkante (32) entspricht, und wobei, wenn die Frontplatte (12) sicher an der Seitenplatte (14) angeklemmt ist, sich sowohl die Winkelfläche (74) als auch die Einspannfläche (34) in passgenauer Ausrichtung befinden.

4. Befestigungseinheit nach einem der Ansprüche 1 bis 3, wobei ein zweites hinteres Ende (85) der Stellplatte (80) schwenkbeweglich gegen einen Federeinrichtungshaltekörper (90) derart geneigt ist, dass, wenn sich der Federeinrichtungshaltekörper (90) in einer ersten Position befindet, sich der Schwenkarm (81) der Stellplatte (80) und das Gleitstück (70) fern vom Montagebügel (18) befinden, und wenn der Federeinrichtungshaltekörper (90) in eine zweite Position gedreht wird, sich der Schwenkarm (81) und das Gleitstück (70) nah am Montagebügel (18) befinden, und wobei in der ersten Position das Gleitstück (70) und die Stellfläche (34) des Montagebügels (18) nicht an Ort und Stelle festgesetzt sind und in der zweiten Position das Gleitstück (70) und die Einspannfläche (34) des Montagebügels (18) an Ort und Stelle festgesetzt sind.

5. Befestigungseinheit nach einem der Ansprüche 1 bis 4, wobei der exzentrische Nockenmechanismus (110) betätigt werden kann, um die Frontplatte (12) in einer linearen Bewegung einzustellen.

6. Befestigungseinheit nach einem der Ansprüche 1 bis 5, wobei die Stellplatte (80) betätigt werden kann, um die Frontplatte (12) in einer zur Bewegungsrichtung von Anspruch 5 senkrechten Richtung einzustellen.

7. Schubladeneinheit, welche die Befestigungseinheit nach einem der Ansprüche 1 bis 6 umfasst.

Revendications

1. Dispositif de montage destiné à fixer un panneau avant (12) perpendiculairement sur un panneau latéral (14), le dispositif de montage comprenant une ferrure de montage (18) fixée au panneau avant en utilisation et un ensemble de ferrure réceptrice (20) fixé au panneau latéral en utilisation, lesdits panneaux avant et latéral faisant partie d'une unité de meuble, dans lequel :

la ferrure de montage (18) possède un rebord de nez (32) fixé de façon amovible sur l'ensemble de ferrure réceptrice (20) ; et
l'ensemble de ferrure réceptrice (20) comprend un bloc de retenue (60) destiné à recevoir le rebord de nez (32) en alignement, une plaque d'actionneur (80) montée rotative, et un moyen chargé par une force, monté pivotant pour mettre en tension la plaque d'actionneur ;
caractérisé en ce que
le rebord de nez (32) de la ferrure de montage (18) comprend une face inférieure (33), une face de verrouillage (34) et une face de serrage (35), la face de serrage présentant des rainures formées sur elle ;
l'ensemble de ferrure réceptrice (20) comprend en outre un coulisseau (70) destiné à maintenir solidement la ferrure de montage (18) et à permettre un mouvement linéaire de la ferrure de montage dans l'ensemble de ferrure réceptrice ; et
le coulisseau (70) est muni d'une ouverture (73), et un bras oscillant (81) de la plaque d'actionneur (80) y est inséré, la plaque d'actionneur pouvant tourner pour déplacer le coulisseau linéairement entre une première position, dans laquelle il serre solidement la ferrure de montage (18) et une seconde position qui permet un ajustement horizontal de la ferrure de montage ; dans lequel, par ajustement de la plaque d'actionneur (80) et d'un moyen à mécanisme à came excentrique (110), le panneau avant (12) peut être ajusté par rapport au panneau latéral (14) suivant deux axes perpendiculaires.

2. Dispositif de montage selon la revendication 1, dans lequel le bloc de retenue (60) comprend une partie creusée (63) munie de rainures.

3. Dispositif de montage selon la revendication 1 ou la revendication 2, dans lequel le coulisseau (70) comprend une face angulaire (74) qui correspond à la face de verrouillage (34) du rebord de nez (32) et dans lequel, lorsque le panneau avant (12) est serré solidement sur le panneau latéral (14), la face angulaire (74) et la face de verrouillage (34) sont en alignement.

4. Dispositif de montage selon l'une quelconque des revendications 1 à 3, dans lequel une deuxième extrémité de queue (85) de la plaque d'actionneur (80) est sollicitée en mouvement pivotant contre un corps (90) de retenue de mécanisme à ressort de telle sorte que, lorsque le corps de retenue (90) de mécanisme

à ressort se trouve dans une première position, le bras pivotant (81) de la plaque d'actionneur (80) et le coulisseau (70) sont en position distale par rapport à la ferrure de montage (18) et que, lorsque le corps (90) de retenue de mécanisme à ressort est tourné dans une deuxième position, le bras pivotant (81) et le coulisseau (70) sont proches de la ferrure de montage (18), et dans lequel, dans la première position, le coulisseau (70) et la face de verrouillage (34) de la ferrure de montage (18) ne sont pas verrouillés en position, tandis que, dans la deuxième position, le coulisseau (70) et la face de verrouillage (34) de la ferrure de montage (18) sont dans une position verrouillée.

5. Dispositif de montage selon l'une quelconque des revendications 1 à 4, dans lequel le mécanisme à came excentrique (110) peut être manoeuvré pour ajuster le panneau avant (12) selon un mouvement linéaire.

6. Dispositif de montage selon l'une quelconque des revendications 1 à 5, dans lequel la plaque d'actionneur (80) peut être manoeuvrée pour ajuster le panneau avant (12) dans une direction perpendiculaire à la direction du mouvement de la revendications 5.

7. Ensemble de tiroir qui comprend le dispositif de montage selon une quelconque des revendications 1 à 6.

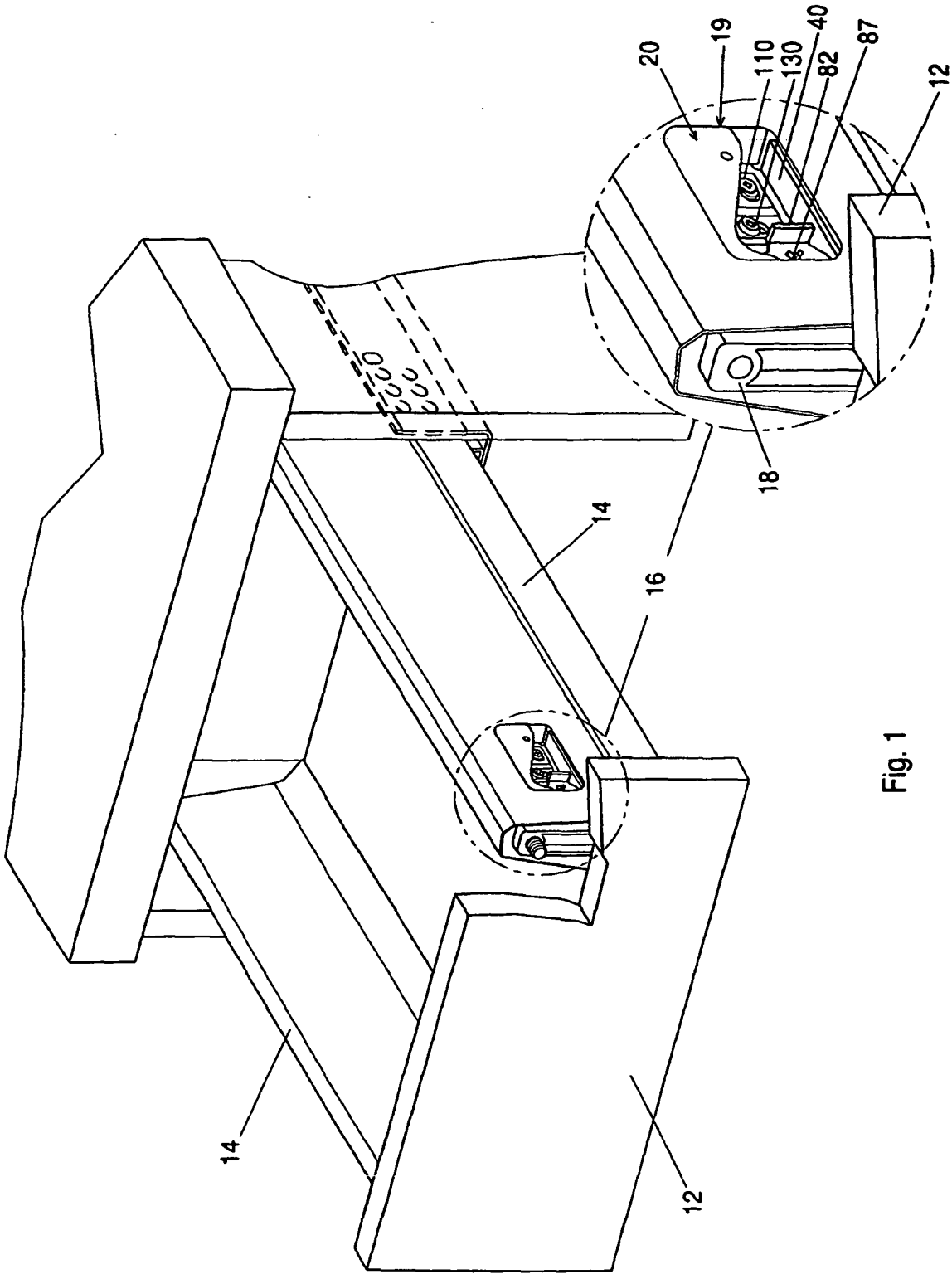


Fig. 1

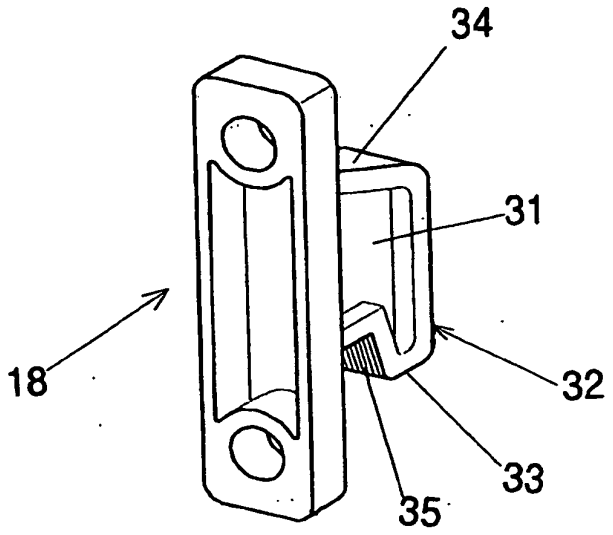


Fig. 2

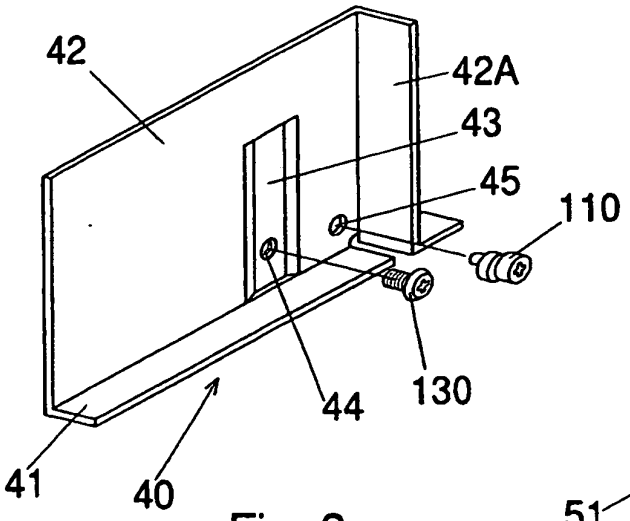


Fig. 3

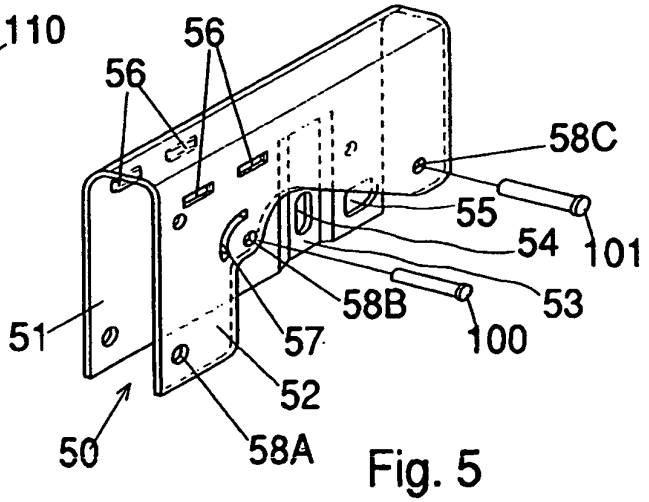
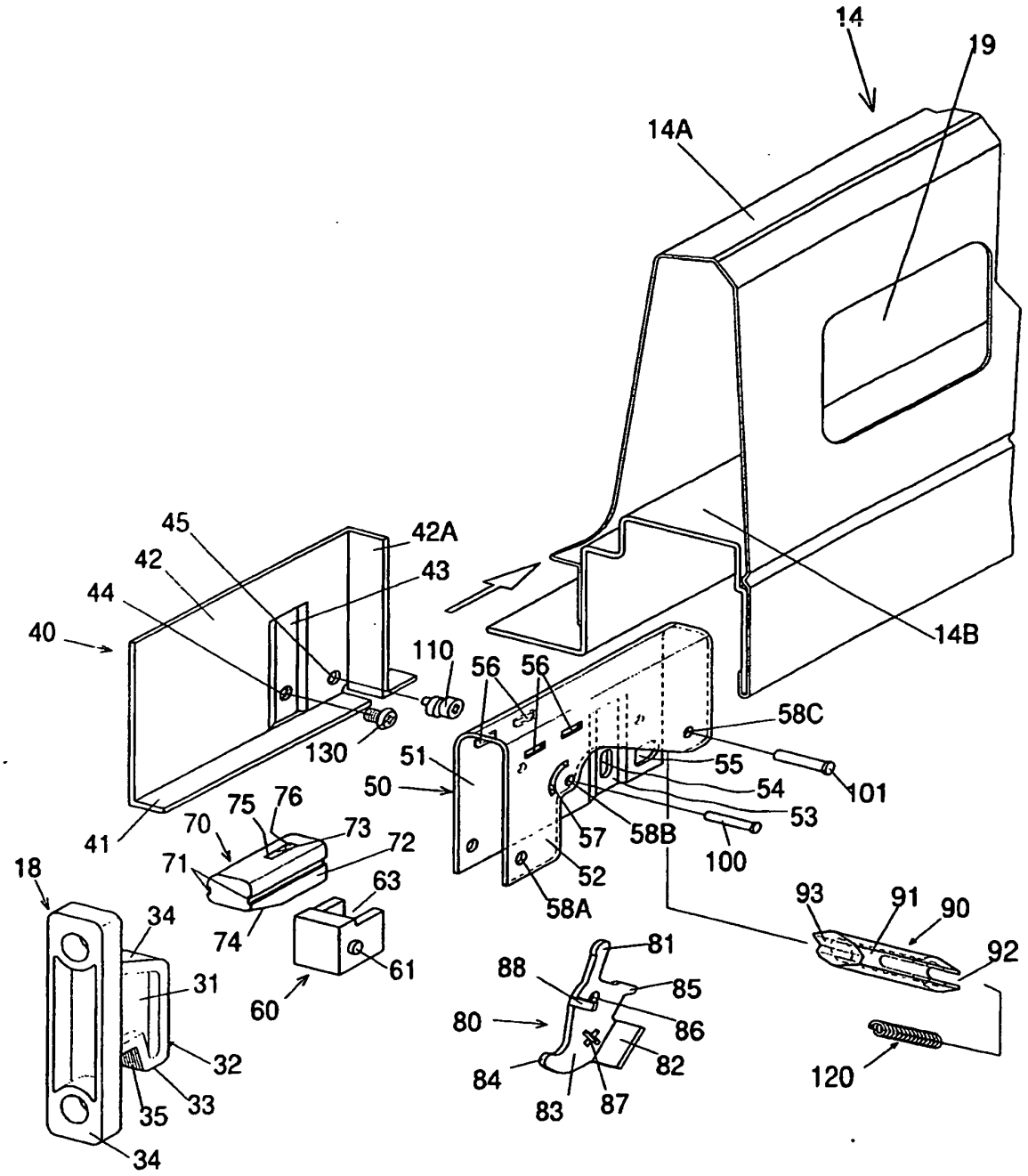


Fig. 5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14B
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42A
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44
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110
56
56
58C
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53
75
76
70
73
57
58B
100
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72
71
63
52
18
58A
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Fig. 4

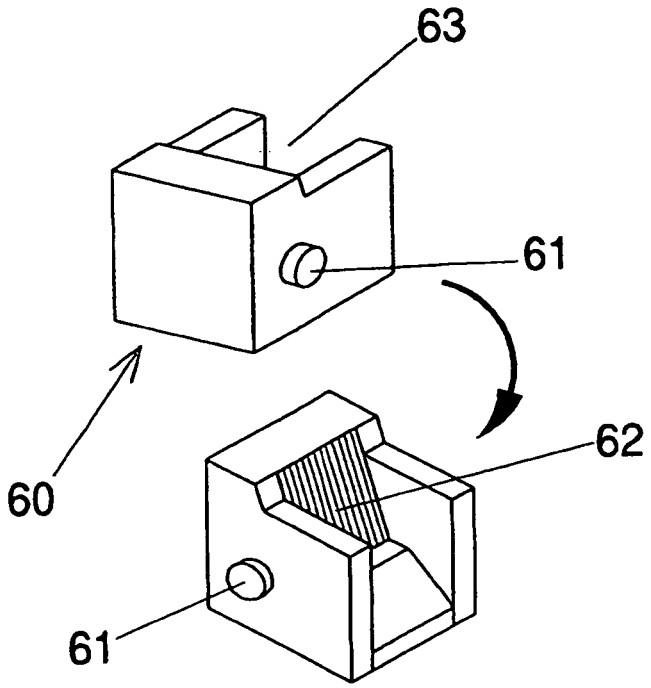

Fig. 6

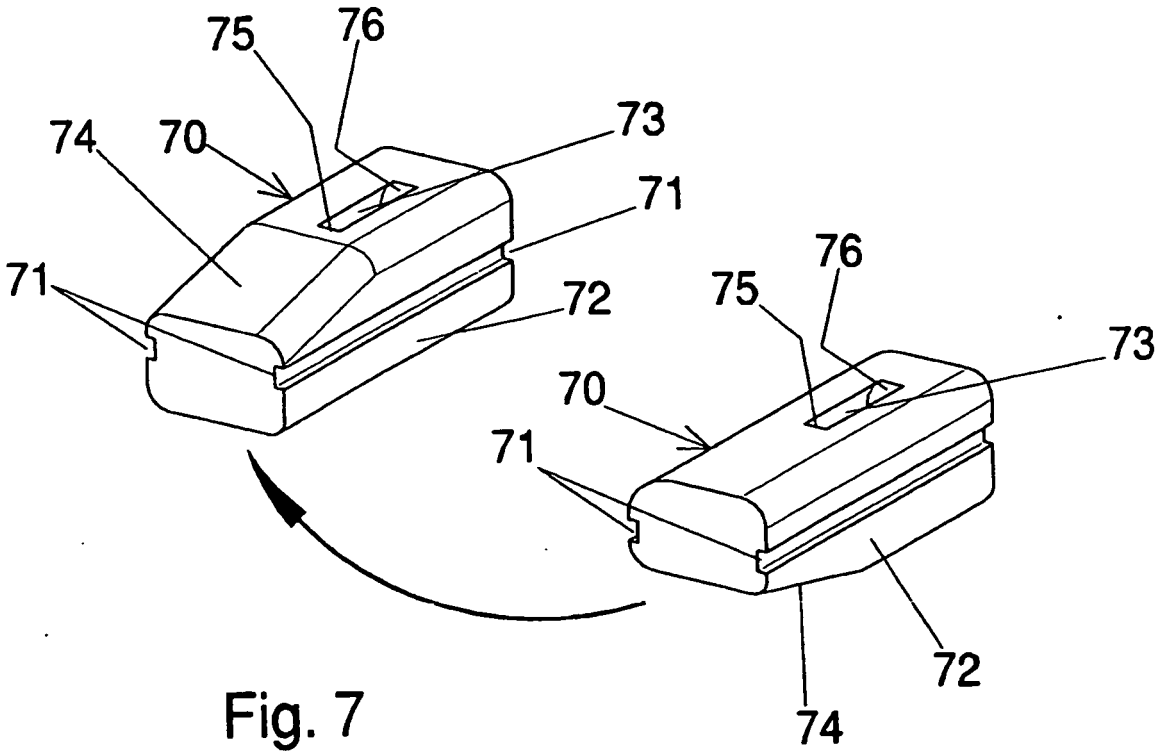

Fig. 7

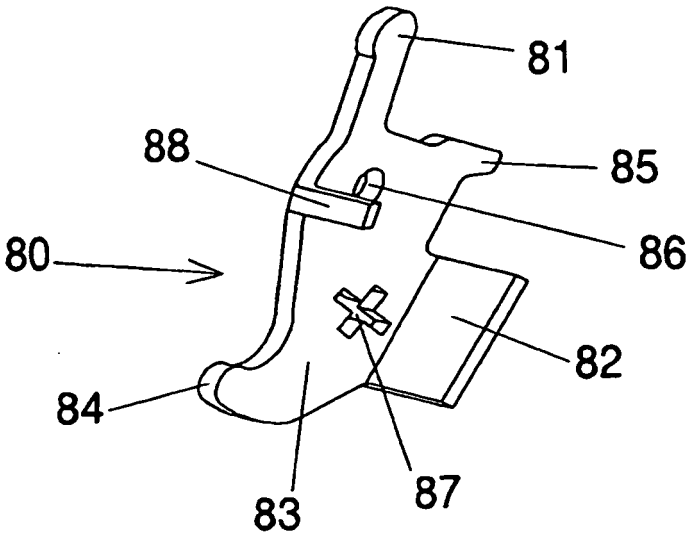

Fig. 8

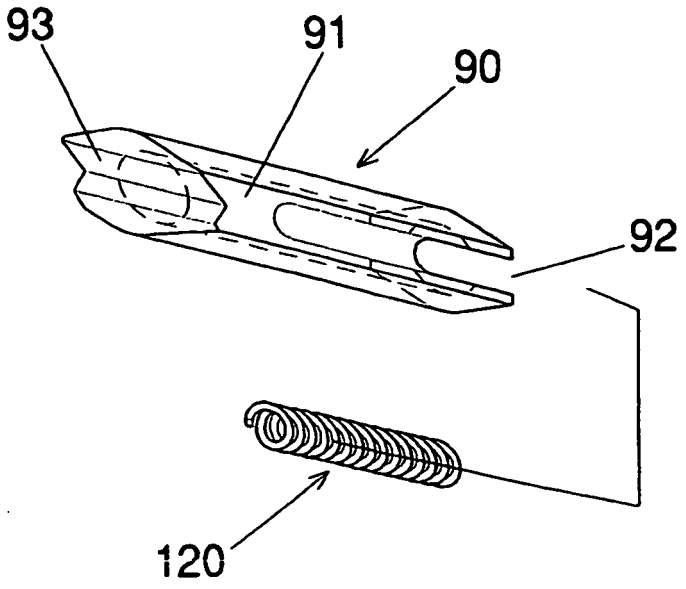

Fig. 9

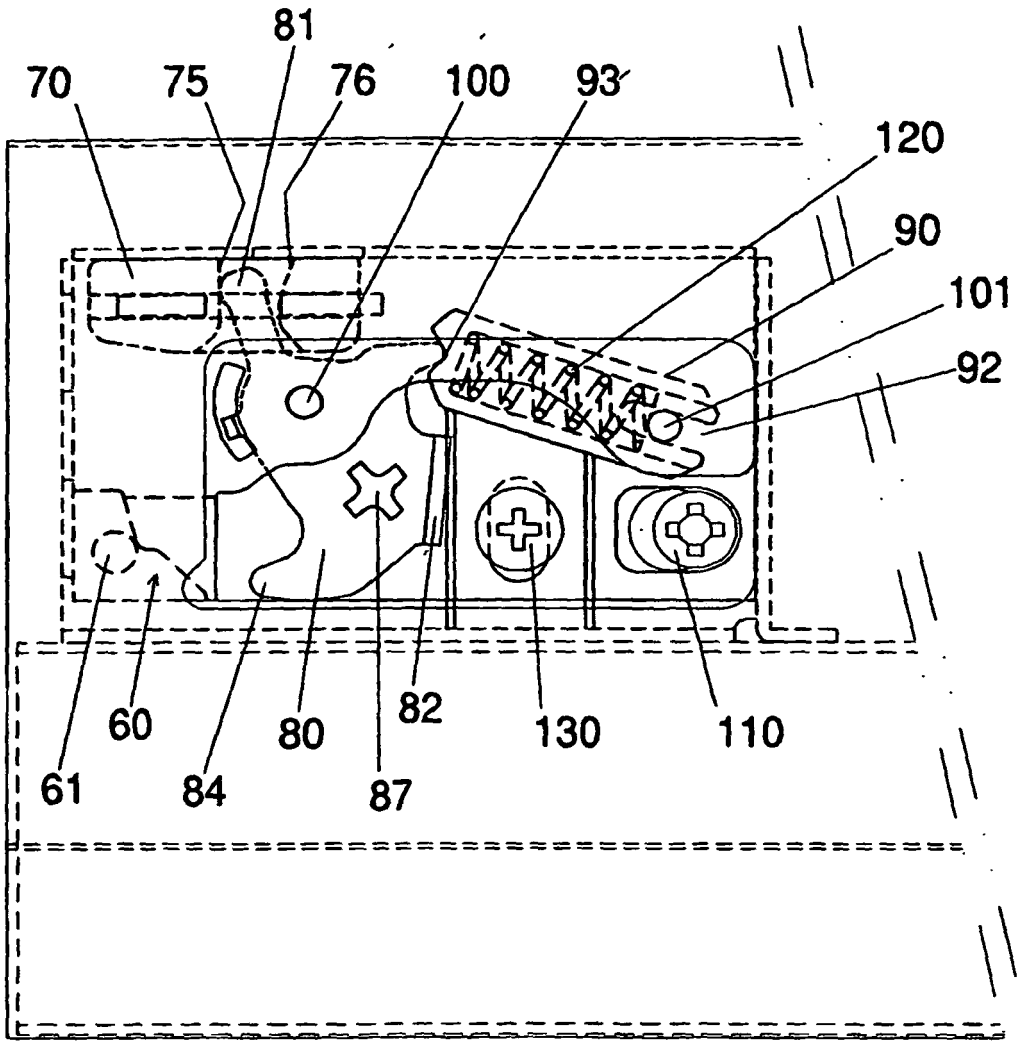

Fig. 10

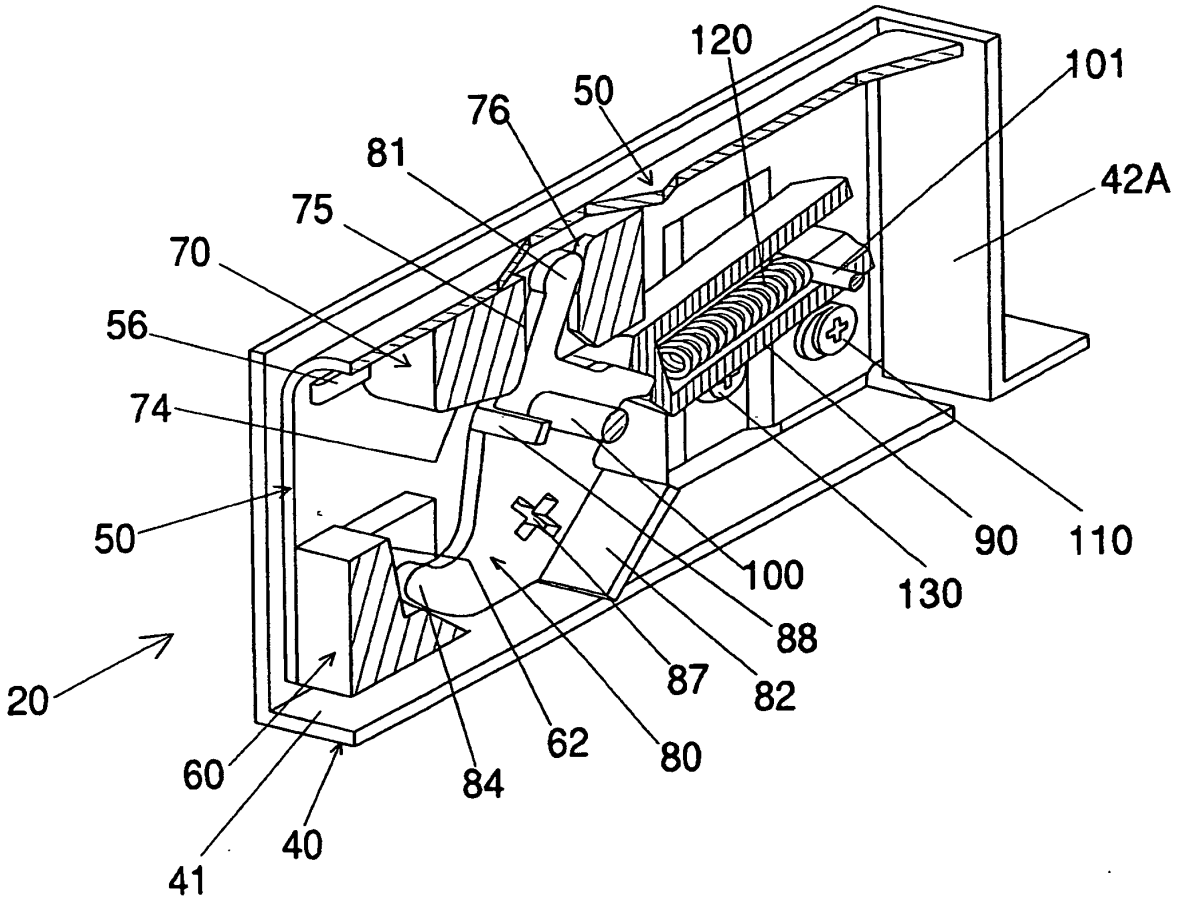
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Fig. 11

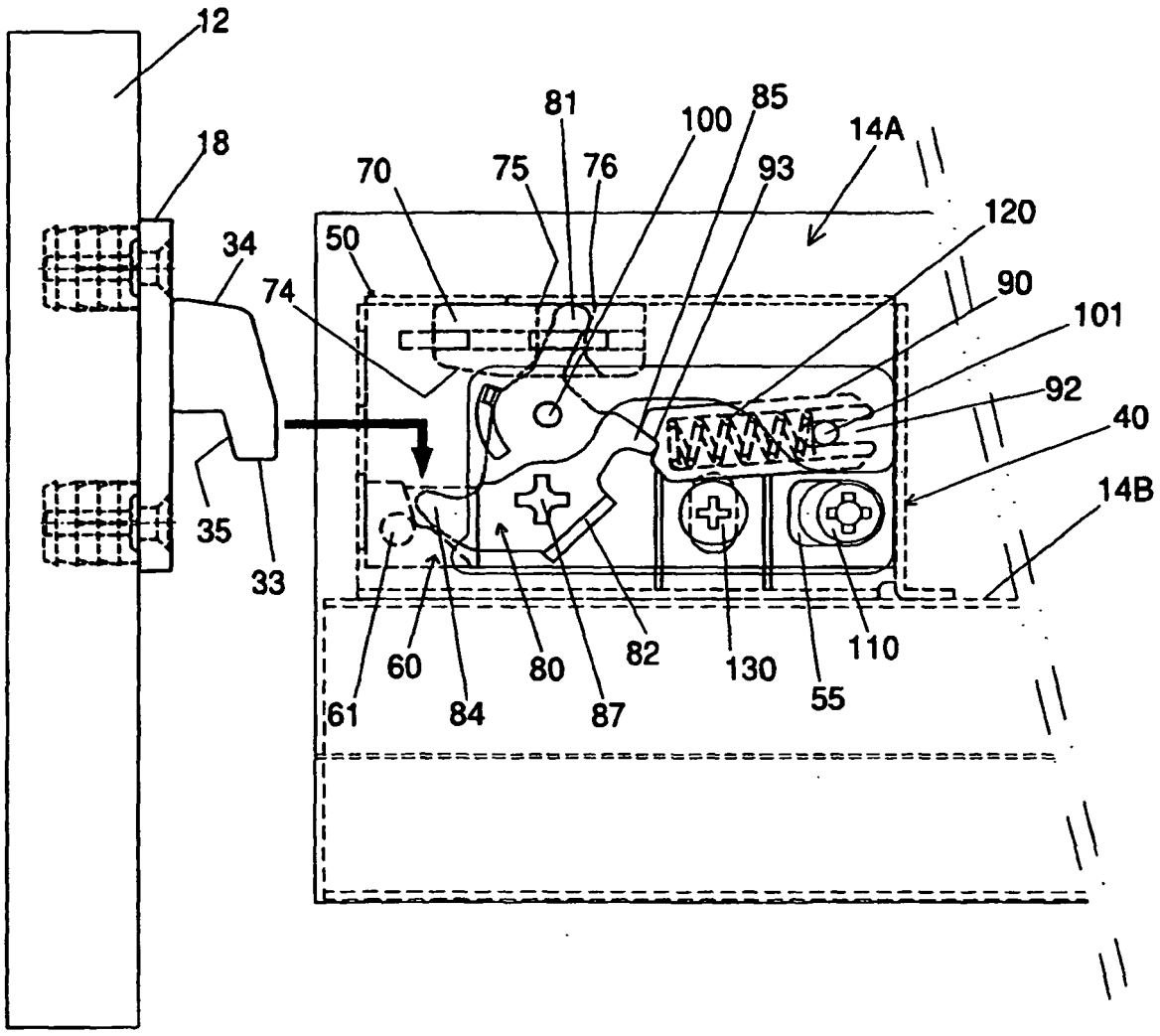
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Fig. 12

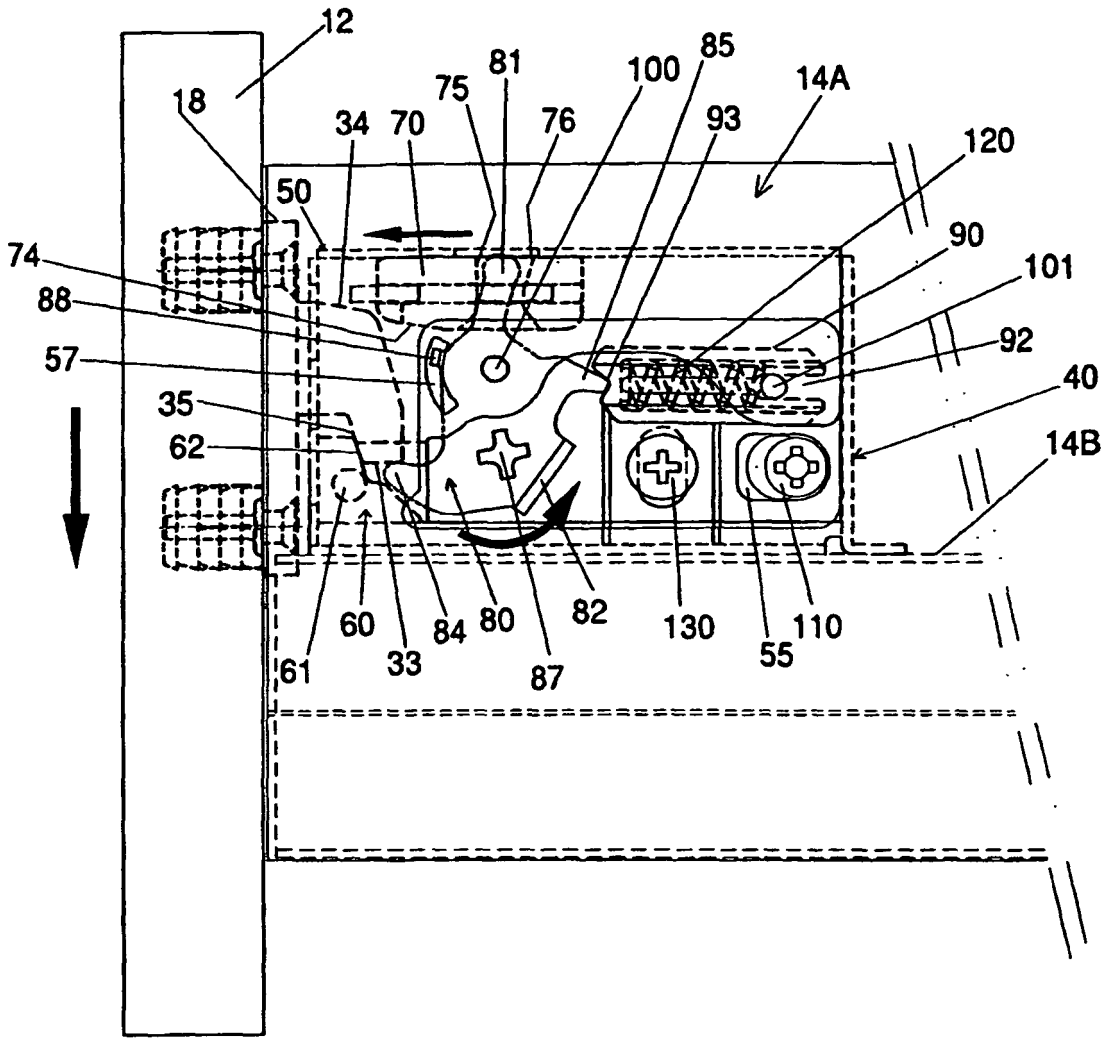
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Fig. 13

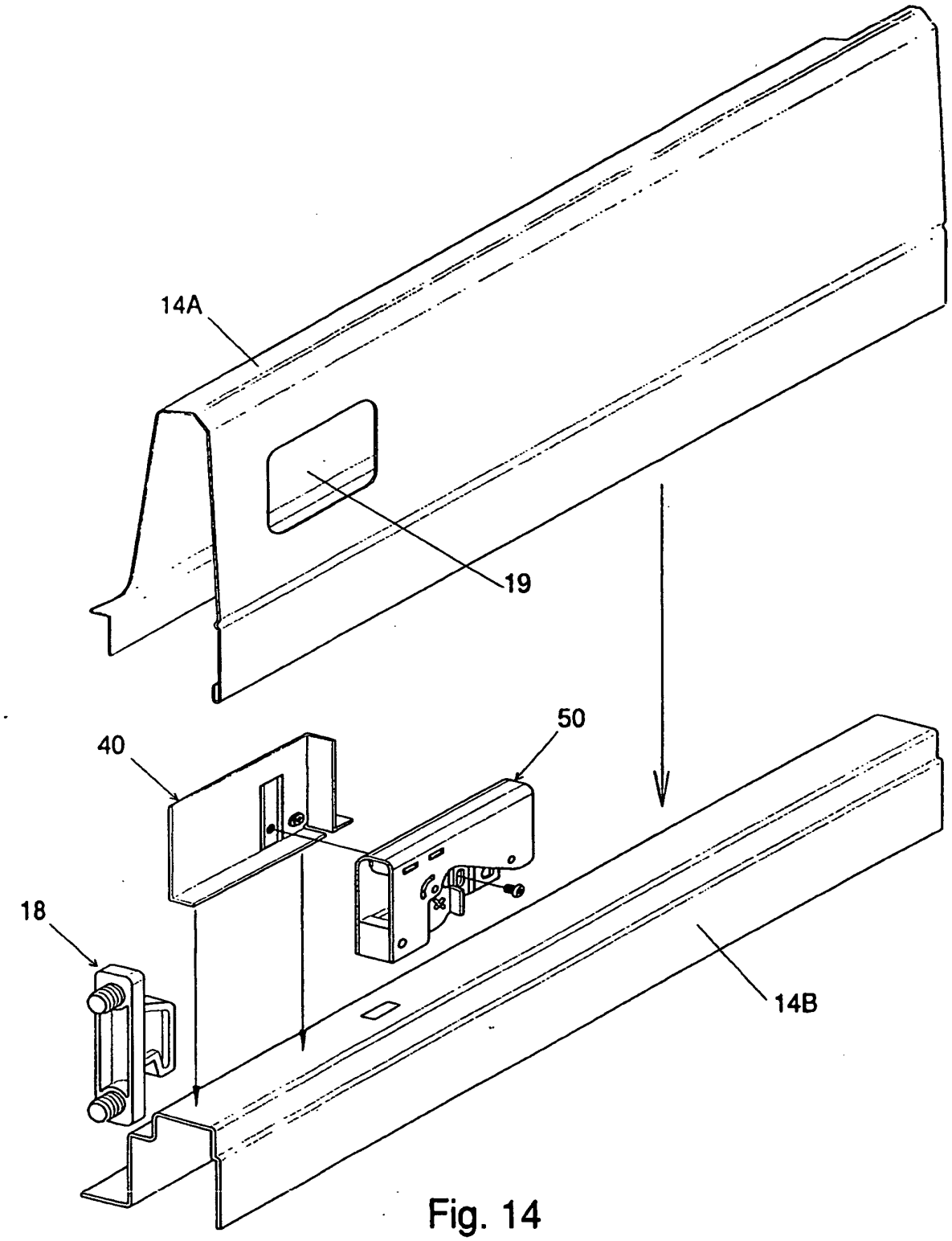

Fig. 14